

FLOATING SEAWEED AS A VECTOR FOR TRAVELING ORGANISMS

Vandendriessche Sofie

Ghent University, Section Marine Biology
Krijgslaan 281 – S8, 9000 Gent, Belgium
E-mail: sofie.vandendriessche@ugent.be

The neuston, *i.e.* the fauna inhabiting the upper layer of oceans and seas, is strongly influenced by the occurrence of floating patches composed of detached coastal seaweed fragments. Ephemeral floating seaweeds harbour a diverse fauna originating from attached seaweeds, the strandline of beaches, the surrounding and underlying water column, the seafloor or the air. These organisms colonise the seaweeds for various reasons, usually including the provision of shelter, food or attachment substrate. The association behaviour of these organisms and their use of the resources offered by floating seaweeds potentially have important ecological consequences, such as the possibility of passive dispersal of associated fauna to new, distant locations by means of rafting.

During this study, different aspects of raft-associated ecology were addressed. The results demonstrate that the habitat formed by floating seaweeds is very complex. Although the presence of floating seaweeds in the neuston can, to a certain degree, be seasonally predicted (storms, seasonal release of fertile structures), the habitat that they form is still very patchy and unstable. Consequently, most species found in association with ephemeral floating seaweed patches are opportunistic of nature. The association behaviour of the encountered species and their (optimal) use of the transient resources offered by floating seaweeds can, in certain circumstances, result in the passive dispersal of associated fauna to new, and distant locations by means of rafting. The process of rafting strongly depends on the longevity of the seaweed raft, which is in turn significantly influenced by temperature and grazing pressure. In favorable conditions, seaweed rafts can potentially cover great distances, carrying with them rafting fauna that are able to survive a long journey in the neuston.